

*City of Alexandria, Virginia*

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MEMORANDUM

DATE: OCTOBER 31, 2002

TO: THE HONORABLE MAYOR AND MEMBERS OF CITY COUNCIL

THROUGH: PHILIP SUNDERLAND, CITY MANAGER <sup>PS</sup>

FROM: RICHARD J. BAIER, P.E., DIRECTOR, T&ES *R. Baier*

SUBJECT: PRESENTATION USED AT THE EISENHOWER AVENUE-TO-DUKE  
STREET TASK FORCE CONNECTOR WORK SESSION, OCTOBER 29, 2002

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Attached for your reference is a copy of the presentation that was used at the work session on October 29, 2002.

Please call if you have questions.

Attachment

cc: Michele Evans, Assistant City Manager  
Rich Baier, Director, T&ES  
Tom Culpepper, Deputy Director, T&ES



*Eisenhower Avenue*

*-to-*

*Duke Street*

*Connector*

*Alexandria City Council*

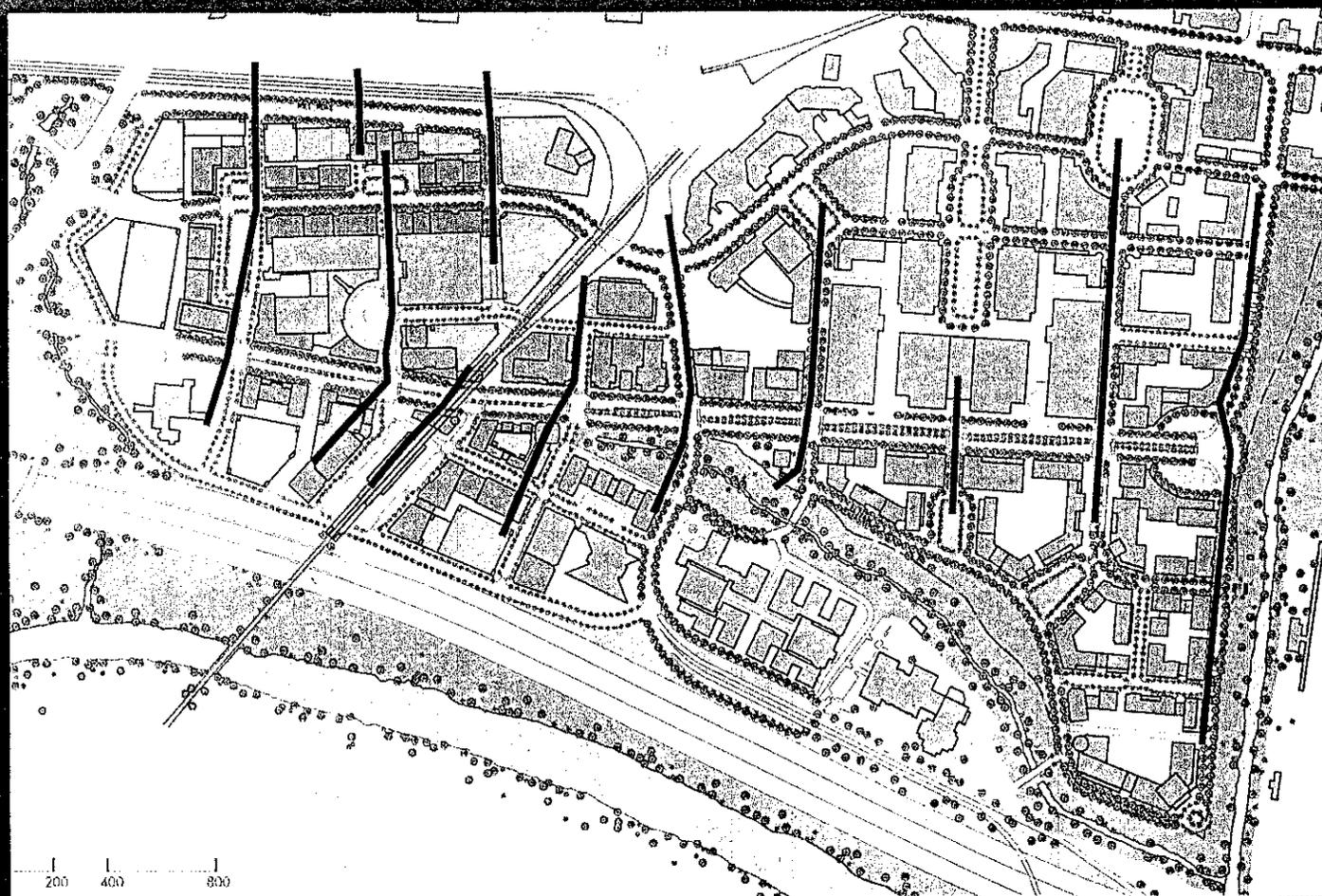
*Working Session*

*29 October 2002*



# *Urban Grid and Connectivity*

*Eisenhower-to-Duke Connector*



- Reduce traffic congestion
- Promote “connectivity”
- Spread out parking resources
- Provide locations for landmarks and civic buildings
- Grid performance effects development potential



• Capitalize on existing transit infrastructure by concentrating land uses at the Metro

• Create a jobs/housing balance to minimize vehicle trips

• Establish an aggressive Transportation Management Program

• Reduce the amount of parking

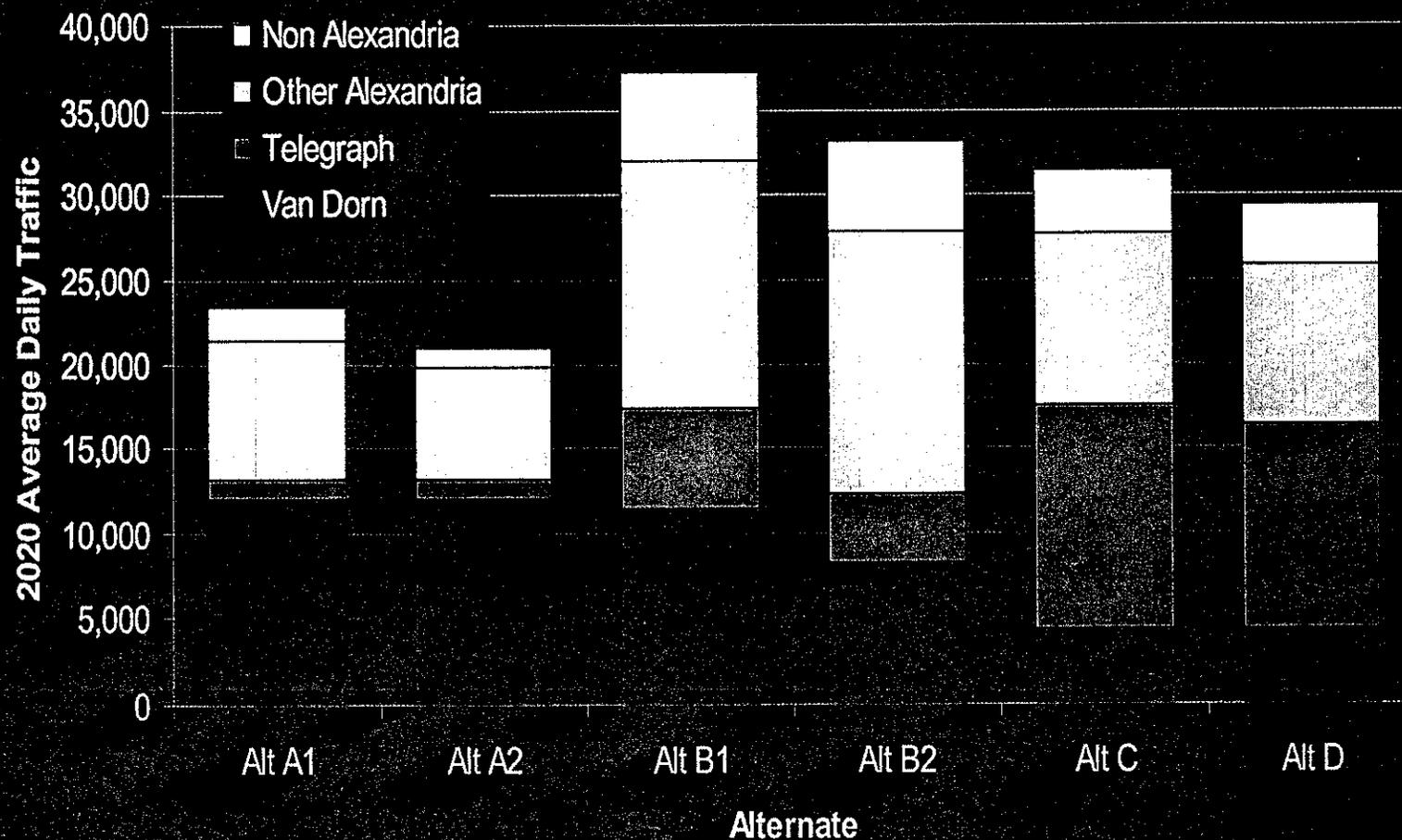


# *Sources of Traffic*

*Eisenhower-to-Duke Connector*



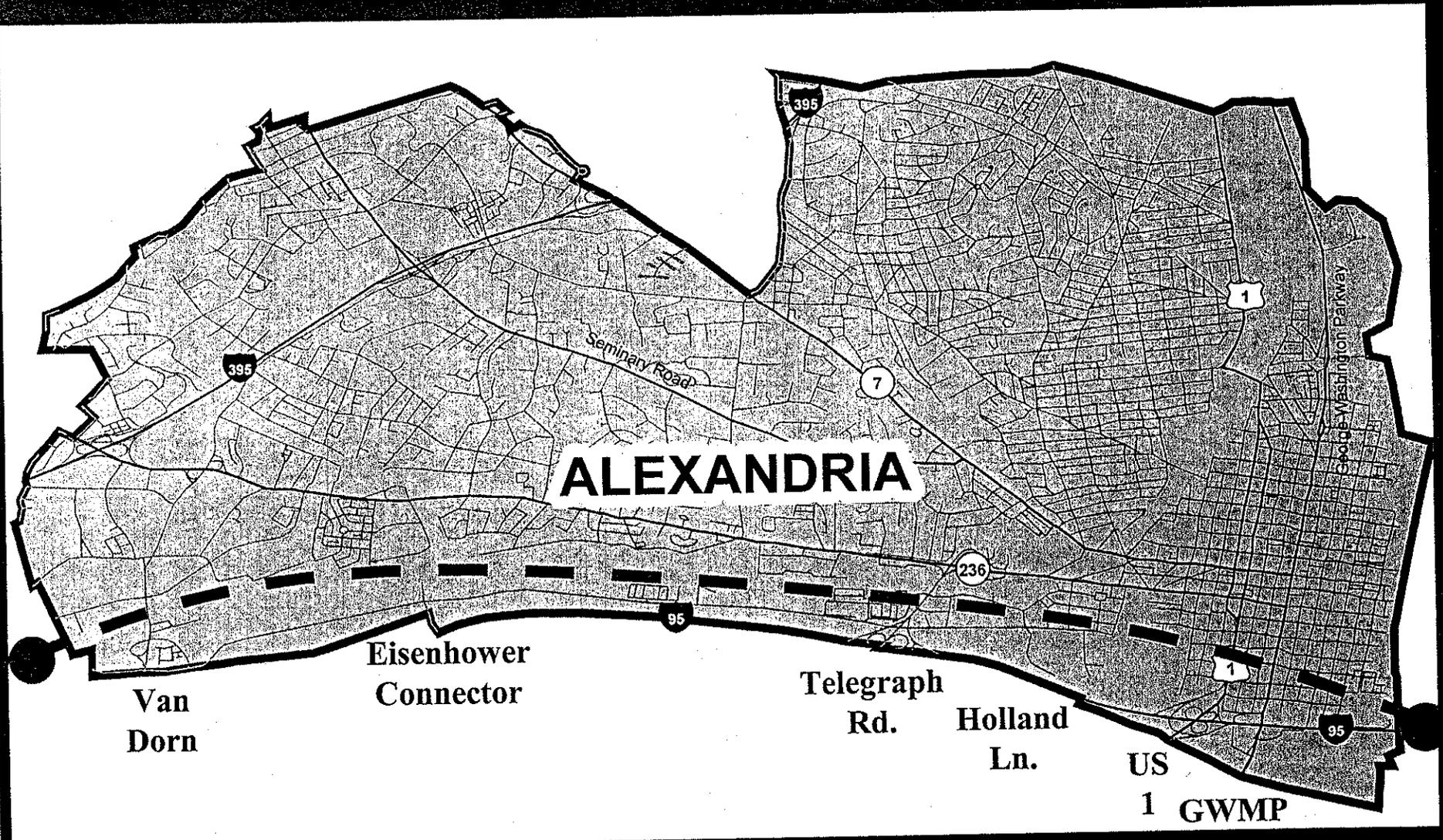
# Sources of Connector Traffic



*Eisenhower-to-Duke Connector*



# 2020 Southern Screenline Traffic Summary





# 2020 Southern Screenline Traffic Summary

ADT in 1,000's

Facility	Existing	NB	A2	B1	C	D	NB w/ Imps.
Van Dorn	45.3	58.7	46.7	47.3	54.4	54.4	63.8
Connector	17.8	-	21.0	37.2	31.5	29.5	-
Telegraph	67.7	63.2	62.1	57.2	50.0	51.2	71.6
Holland	7.2	13.9	13.4	11.1	12.0	12.0	13.4
US 1	65.9	82.5	77.0	71.5	74.4	74.8	79.0
GW Pkwy	29.6	38.1	37.4	37.3	37.9	38.1	37.6
Σ (west)	130.8	121.9	129.8	141.7	135.9	135.1	135.4
Σ (east)	102.7	134.5	127.8	119.9	124.3	124.9	130.0
Σ (w-e)	233.5	256.4	257.6	261.6	260.2	260.0	265.4
Change vs. NB ("new" trips)			1.2	5.2	3.8	3.6	9.0
% Change vs No Build			0.5%	2.0%	1.5%	1.5%	3.5%



# Connectors Serve Alexandria Traffic

## 2020 Traffic on North Quaker Lane

	Existing	No Build	No Build w/ Imp.	Alts A1/A2	Alts B1/B2	Alt C	Alt D1
Internal to Study Area	N/A	57%	56%	57%	56%	57%	57%
Internal to Alexandria	55%	66%	65%	66%	65%	66%	67%
Average Daily Traffic	22,000	28,500	30,200	28,500	32,900	31,500	32,000
Volume External to Alexandria	9,900	9,700	10,700	9,800	11,500	10,600	10,600
Percent Change	Base	-2%	8%	-1%	16%	7%	7%

*Study area includes both original and expanded study areas as defined in the Technical Report*



# *Travel Demand Forecasts*

**How were the travel demand forecasts developed?**



## *Travel Demand Forecasts*

The MWCOCG regional travel demand forecasting model was the basis for all travel demand forecasts.

- Developed, calibrated and maintained by COG specifically for the Washington region
- Approved by FHWA, EPA and COG jurisdictions
- Standard for all significant transportation planning projects in the metropolitan area
- Version 1 TDFM with Round 6.1 cooperative land-use projections



## *How Does the COG TDFM Work?*

The COG TDFM is a MINUTP procedure based on the four-step transportation planning process.

1. Trip Generation      - *How much travel?*
2. Trip Distribution    - *Where does it go?*
3. Mode Choice         - *What mode is used?*
4. Traffic Assignment   - *What routes will it take?*

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Reference: *Version 1 Travel Model User's Guide*, Metropolitan Washington Council of Governments, October 1998

*Eisenhower-to-Duke Connector*



## *How Does the COG TDFM Work?*

For modeling purposes, the region is divided into 487 districts and 2,191 zones which represent the 22 major jurisdictions

1. Alexandria is represented by 6 districts and 60 zones
2. Eisenhower Valley is represented by 14 zones, 5 in the east end and 9 in the west end
3. The Eisenhower Avenue corridor within the study area is represented by 4 zones
4. No additional zones were created for this study

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Reference: *Version 1 Travel Model User's Guide*, Metropolitan Washington Council of Governments, October 1998



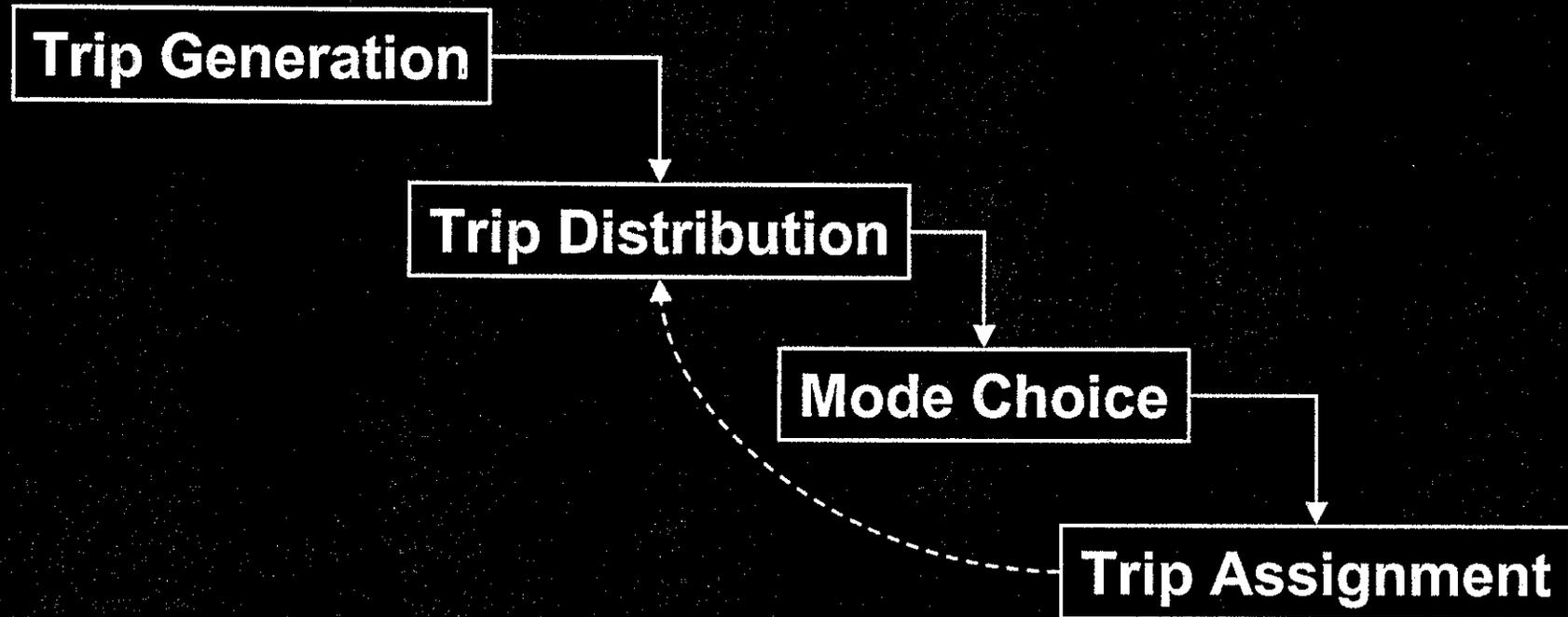
## *Underlying Land-Use Forecasts*

Cooperative Land-Use Projections were used as base data

1. Round 6.1, 2020 land-use data
2. Based on revised 2020 projections, land-use in the west Eisenhower Valley zones was increased by 1,944 dwelling units and 942 jobs
3. Land-use in the east end, equivalent to 8.8 million square feet of mixed residential and commercial uses, was not changed



# *The Forecasting Process*



Reference: *Version 1 Travel Model User's Guide*, Metropolitan Washington Council of Governments, October 1998

*Eisenhower-to-Duke Connector*



## *Trip Generation*

**Objective – Project the number of trip ends (productions and attractions) in each district**

1. Trip ends are projected by trip purpose as a function of land-use and socio-economic variables
2. Trip purposes – Home-based work, shop and other, non home-based, medium truck, heavy truck
3. Variables – Households, population, employment and vehicle ownership

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Reference: *Version 1 Travel Model User's Guide*, Metropolitan Washington Council of Governments, October 1998



## *Trip Distribution*

**Objective – Determine the number of trips between district and zone pairs**

1. Links trip productions and attractions by trip purpose using calibrated friction factors
2. Individual tables for each trip purpose are combined to create total trip table
3. Trips are assigned to network, link travel times are updated and distribution procedure is repeated using updated link travel times

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Reference: *Version 1 Travel Model User's Guide*, Metropolitan Washington Council of Governments, October 1998



## *Mode Choice*

**Objective – Apportion home-based work trips among transit, HOV and LOV modes**

1. Multinomial logit model developed specifically for the Washington region
2. Mode choice is determined by the disutility of each mode compared to the total disutility of all modes
3. Based on relative time, cost and convenience of travel by each mode, availability of transit/HOV facilities, and traveler socio-economic factors

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Reference: *Version 1 Travel Model User's Guide*, Metropolitan Washington Council of Governments, October 1998



## *Trip Assignment*

**Objective – Assign trips to specific routes to determine forecast loadings**

1. Trips are assigned to minimum time paths
2. Iterative, incremental capacity-restraint procedure
3. Link travel times updated each iteration
4. All highway trips (LOV, HOV, non-work and truck) are simultaneously loaded

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Reference: *Version 1 Travel Model User's Guide*, Metropolitan Washington Council of Governments, October 1998



# *Travel Demand Forecasts*

**How accurate are the forecasts?**



# *Model Calibration Results*

## Comparisons of Observed and Estimated Travel Characteristics

1. Calibrated based on 1994 travel data
2. Vehicle miles of travel
3. Vehicular crossings of selected screenlines

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Reference: *Version 1 Travel Model User's Guide*, Metropolitan Washington Council of Governments, October 1998

*Eisenhower-to-Duke Connector*



# Model Calibration Results

## Vehicle-Miles of Travel (VMT) by Jurisdiction

Jurisdiction	VMT (thousands)		Estimated/ Observed
	Observed	Estimated	
District of Columbia	7,875	7,813	0.99
Montgomery County	16,722	16,961	1.01
Prince George's County	19,321	18,623	0.96
Arlington County	4,132	4,125	1.00
City of Alexandria	2,027	2,190	1.08
Fairfax County	22,818	22,413	0.98
Loudoun County	2,594	2,850	1.10
Prince William County	6,051	6,104	1.01
Frederick County	4,833	5,144	1.06
Howard County	6,951	7,621	1.10
Anne Arundel County	8,561	8,914	1.04
Charles County	1,924	1,857	0.97
Total	103,809	104,615	1.01

Reference: *Version 1 Travel Model User's Guide*, Metropolitan Washington Council of Governments, October 1998

*Eisenhower-to-Duke Connector*



# Model Calibration Results

## Vehicular Crossings by Screenline

Number	Screenline Location	Crossings (thousands)		Estimated/ Observed
		Observed	Estimated	
1	Ring 1, Virginia	802	807	1.01
2	Ring 1, DC	915	970	1.06
3	Ring 3, Arlington	866	935	1.08
4	Ring 3, DC	992	982	0.99
5	Beltway, Virginia	1,110	1,120	1.01
6	Beltway, Maryland	1,603	1,609	1.00
7	Ring 5, Virginia	1,052	1,035	0.98
8	Ring 5, Maryland	1,368	1,439	1.05
9	Ring 7, Virginia	598	641	1.07
17	Southern Fairfax / Prince William Radial	346	370	1.07
18	Central Fairfax Radial	544	679	1.25
19	VA Route 7 Radial	466	457	0.98
20	Inner Potomac River Crossings	892	989	1.11

Only selected screenlines shown

Reference: *Version 1 Travel Model User's Guide*, Metropolitan Washington Council of Governments, October 1998

***Eisenhower-to-Duke Connector***



# *Two-Lane Non-Connectors (Roads, Streets)*



**Table A. Change in 2020 ADT with 2 Lane Connectors**

	<b>A2</b>	<b>A2 2L</b>	<b>B1</b>	<b>B1 2L</b>	<b>C</b>	<b>C 2L</b>	<b>D</b>	<b>D 2L</b>
Van Dorn	46,700	48,400	47,300	49,440	54,400	55,400	54,400	55,400
Telegraph	62,100	62,100	57,200	58,200	50,000	51,400	51,200	52,600
Clermont	33,500	33,500	47,100	45,100	26,500	25,500	26,500	25,500
N Quaker	28,500	28,500	32,900	32,400	31,500	30,000	32,000	31,000

*Eisenhower-to-Duke Connector*



**Table IV-10 (Revised). Simulation Results, 2020 PM (Average wait in seconds)  
(With Two-Lane Connector)**

Intersection	No Build	Alt A2	Alt A2 Prime	Alt B 1	Alt B1 Prime	Alt C	Alt C Prime	Alt D	Alt D Prime	NB w/ Imp
Eisenhower Ave										
Van Dorn	206	54	76	97	131	194	206	163	209	11
Clermont	112	87	100	86	84	137	137	118	118	122
Van Dorn Street										
Mall	218	166	175	133	135	263	273	162	162	120
Edsall	120	203	211	98	97	96	100	97	97	102
Pickett St	116	196	212	80	82	123	121	132	128	43
Duke Street										
S Pickett	26	15	20	32	42	25	31	38	38	29
Pickett/ Cameron	17	19	23	15	17	17	17	20	20	17
Jordan	95	23	30	18	22	19	22	16	19	31
N Quaker Ln	87	36	42	38	42	34	37	31	33	30
S Quaker Ln	15	15	15	19	20	19	19	16	16	17
Sweely St	53	44	50	43	61	34	46	41	52	30
Cambridge St	70	33	44	50	64	42	52	31	38	15
W. Taylor Run Pk	21	16	18	13	14	11	11	7	7	11
Seminary Rd/Janevs Ln										
Jordan	38	27	33	17	20	22	24	17	19	15
Ft Williams Pkwy	14	7	8	7	7	7	7	9	9	11
N Quaker Ln	34	62	62	46	46	37	37	35	35	45
Yale St	50	61	61	41	41	61	61	35	35	33
<b>Total Network Delay</b>	<b>336</b>	<b>284</b>	<b>310</b>	<b>188</b>	<b>201</b>	<b>228</b>	<b>235</b>	<b>256</b>	<b>288</b>	<b>219</b>

*Eisenhower-to-Duke Connector*



### Construction and Right-of-Way Costs

<i>Alternate</i>	Estimated Cost		
	Right of Way	Construction	Total
No Build	0	0	0
No Build with Improvements	\$17,000,000	\$38,000,000	\$55,000,000
Alternate A1	8,100,000	26,900,000	35,000,000
Alternate A2	16,600,000	19,000,000	35,600,000
<b>Two-Lane Alternate A2</b>	<b>9,100,000</b>	<b>12,300,000</b>	<b>21,400,000</b>
Alternate B1	500,000	33,000,000	33,500,000
<b>Two-Lane Alternate B1</b>	<b>300,000</b>	<b>19,900,000</b>	<b>20,200,000</b>
Alternate B2	500,000	35,200,000	35,700,000
Alternate C	3,000,000	15,700,000	18,700,000
<b>Two-Lane Alternate C</b>	<b>1,400,000</b>	<b>10,300,000</b>	<b>11,700,000</b>
Alternate D	5,800,000	19,000,000	24,800,000
<b>Two-Lane Alternate D</b>	<b>2,200,000</b>	<b>12,200,000</b>	<b>14,400,000</b>



**TABLE IV-1 (Revised). Resource Impacts by Alternate  
(With Two-Lane Alternates)**

Criteria	Alt A1	Alt A2	Alt B1	Alt B2	Alt C	Alt D	NB w/ Imp.
<b>Natural Environment</b>							
Wetland Impacts	0	0	0	0	0	0	0
Permit Challenge	Individual	General	General	General	None	None	General
Forests Impacts (acres)	1.61	0.52	1.27	1.39	0.18	None	1.21
<b>Two-Lane Option</b>	-	<b>0.29</b>	0.71	-	<b>0.1</b>	<b>None</b>	-
Floodplain (acres)	0.528	1.652	0.578	1.016	None	None	None
<b>Two-Lane Option</b>	-	<b>0.92</b>	<b>0.32</b>	-	<b>None</b>	<b>None</b>	<b>None</b>
RPA (Waterway Buffer) (acres)	4.6	5.63	8.1	8.47	None	None	0.06
<b>Two-Lane Option</b>	-	<b>3.13</b>	<b>4.5</b>	-	<b>None</b>	<b>None</b>	-
Stream Crossings	3	2	2	5	None	None	None
<b>Cultural Resources</b>							
Potential for Disturbing Historic/Prehistoric Archeological Resources	Medium Potential	Medium Potential	High Potential	High Potential	High Potential	Medium Potential	Medium Potential
Known Archaeological Sites within 100'	No known sites	No known sites	2 known sites	2 known sites	2 known sites	No known sites	No known Sites
Potential for Disturbing Historic Resources eligible or listed on the National Register	None	None	None	None	None	None	None



**TABLE IV-2 (Revised). Socio-Economic Benefits and Impacts by Alternate  
(with Two-Lane Alternates)**

Criteria	Alt A1	Alt A2	Alt B1	Alt B2	Alt C	Alt D	NB w/ Imp
<b>Socio Economic Benefits</b>							
Change in emergency response time to Point A	N/A	N/A	N/A	N/A	-3.33	-2.33	Zero
Change in emergency response time to Point B	-1.96	-1.68	-2.07	-2.15	N/A	N/A	Zero
Community facilities within ½ mile of termini	3	3	4	5	4	7	N/A
Bicycle or general use trails connected	2	2	3	4	2	2	Zero
<b>Cultural Resources</b>							
Acres of Parks taken	1.99	0	3.27	3.63	0	0	0
<b>Two-Lane Option</b>	-	0	1.82	-	0	0	0
Park activities impacted	1	0	2	2	0	0	0
Potential for through traffic in residential areas	Low	Low	Low	Medium	Medium 0	Low	None
Number of residences taken	0	---	0	0	4	0	0
Number of businesses taken	8	9	0	0	0	3	9
<b>Two-Lane Option</b>	-	6	0	0	2	0	-
Number of sensitive noise receptors ¼ mile	1	1	3	3	156	1	---
Number of residences within 500'	11	0	331	325		145	---

October 29, 2002

## Two-Lane Connector Alternates Preliminary Findings

**I. Background:** The analyses conducted for the Eisenhower Avenue to Duke Street Connector Study assumed each connector would be four lanes with 91-foot bridge sections. This white paper discusses the impact of alternative two-lane sections on traffic service and resource impacts.

The two-lane minimum bridge section with a 10-foot multipurpose trail will be 51 feet wide. This section is based on minimum standards for undivided roadways (double yellow line only) and does not include a barrier between the multipurpose trail and the traffic lanes. The four-lane 91-foot section includes a 16-foot median.

Traffic demand on each connector was reduced so that the termini would be slightly over capacity. Capacity was measured using the Critical Lane Method. Traffic at the termini was balanced, and then the volumes at adjacent intersections were adjusted. North / south traffic demand not served by the connectors was reassigned to Van Dorn and Telegraph.

Impacts and costs were revised based on the smaller width roadway and bridge. Changes in traffic volumes, delay, impacts and costs were evaluated and are shown for Alternates A2, B1, C and D.

### II. Changes in Traffic Service.

The traffic on the Connectors is expected to decrease by approximately 25%. Overall, this is expected to slightly increase traffic on Van Dorn and Telegraph and slightly decrease traffic on Clermont and N Quaker. Table A below shows changes in Average Daily Traffic (ADT) for Alternates A2, B1, C and D.

<b>Table A. Change in 2020 ADT with 2 Lane Connectors</b>								
	<b>A2</b>	<b>A2 2L</b>	<b>B1</b>	<b>B1 2L</b>	<b>C</b>	<b>C 2L</b>	<b>D</b>	<b>D 2L</b>
Van Dorn	46,700	48,400	47,300	49,440	54,400	55,400	54,400	55,400
Telegraph	62,100	62,100	57,200	58,200	50,000	51,400	51,200	52,600
Clermont	33,500	33,500	47,100	45,100	26,500	25,500	26,500	25,500
N Quaker	28,500	28,500	32,900	32,400	31,500	30,000	32,000	31,000

Table IV – 10 (Revised), on the following page, shows the revised delay for intersections in the network. Connector intersection approaches are restricted to three lanes with the two-lane section (left, through and through & right or right only). With the four-lane section, these intersection approaches were four lanes.

Overall delay, shown in bold, is generally about 10% higher for the two-lane options compared to the four-lane options.

Eisenhower Avenue-to-Duke Street Connector Study  
 Technical Memorandum

**Table IV-10 (Revised). Simulation Results, 2020 PM (Average wait in seconds)  
 (With Two-Lane Connector)**

Intersection		No Build	Alt A2	Alt A2 Prime	Alt B 1	Alt B1 Prime	Alt C	Alt C Prime	Alt D	Alt D Prime	NB w/ Imp
Eisenhower Ave											
	Van Dorn	206	54	76	97	131	194	206	163	209	11
	Clermont	112	87	100	86	84	137	137	118	118	122
Van Dorn Street											
	Mall	218	166	175	133	135	263	273	162	162	120
	Edsall	120	203	211	98	97	96	100	97	97	102
	Pickett St	116	196	212	80	82	123	121	132	128	43
Duke Street											
	S Pickett	26	15	20	32	42	25	31	38	38	29
	Pickett/ Cameron	17	19	23	15	17	17	17	20	20	17
	Jordan	95	23	30	18	22	19	22	16	19	31
	N Quaker Ln	87	36	42	38	42	34	37	31	33	30
	S Quaker Ln	15	15	15	19	20	19	19	16	16	17
	Sweely St	53	44	50	43	61	34	46	41	52	30
	Cambridge St	70	33	44	50	64	42	52	31	38	15
	W. Taylor Run Pk	21	16	18	13	14	11	11	7	7	11
Seminary Rd/Janey's Ln											
	Jordan	38	27	33	17	20	22	24	17	19	15
	Ft Williams Pkwy	14	7	8	7	7	7	7	9	9	11
	N Quaker Ln	34	62	62	46	46	37	37	35	35	45
	Yale St	50	61	61	41	41	61	61	35	35	33
<b>Total Network Delay</b>		<b>336</b>	<b>284</b>	<b>310</b>	<b>188</b>	<b>201</b>	<b>228</b>	<b>235</b>	<b>256</b>	<b>288</b>	<b>219</b>

### III. Impacts and Costs

**Natural Environment:** Impacts to forests and surface water resources are reduced about 40% by the two-lane options as compared to the four-lane alternates. Permitting requirements will remain unchanged.

**Cultural Resources:** The potential for encountering archeological resources will be not be significantly different with the two-lane section. Overall, the impacts to cultural resources is unchanged.

**Socio Economic:** The socio-economic benefits from the connectors will be retained with the two-lane sections. Emergency response time benefits are also unchanged, and recreational facilities will still be connected with the smaller roadway.

Park impacts will be reduced for the B1 alternate. Alternates A2, C and D will all have fewer commercial takings with the two-lane section.

Revised Table IV-1 Resource Impacts by Alternate and Table IV-2 Socio-Economic Benefits and Impacts by Alternate are on following pages. The two-lane section alternatives are shown in **bold**.

**Construction and Right of Way Cost:** Costs will be less with the smaller typical sections. The 51-foot right-of-way was assumed for bridge and at grade sections. This smaller section saves considerable right-of-way expense. Existing roadways, such as Roth and Wheeler will not require extensive widening.

<i>Alternate</i>	Estimated Cost		
	Right of Way	Construction	Total
No Build	0	0	0
No Build with Improvements	\$ 17,000,000	\$ 38,000,000	\$ 55,000,000
Alternate A1	8,100,000	26,900,000	35,000,000
Alternate A2	16,600,000	19,000,000	35,600,000
<b>Two-Lane Alternate A2</b>	<b>9,100,000</b>	<b>12,300,000</b>	<b>21,400,000</b>
Alternate B1	500,000	33,000,000	33,500,000
<b>Two-Lane Alternate B1</b>	<b>300,000</b>	<b>19,900,000</b>	<b>20,200,000</b>
Alternate B2	500,000	35,200,000	35,700,000
Alternate C	3,000,000	15,700,000	18,700,000
<b>Two-Lane Alternate C</b>	<b>1,400,000</b>	<b>10,300,000</b>	<b>11,700,000</b>
Alternate D	5,800,000	19,000,000	24,800,000
<b>Two-Lane Alternate D</b>	<b>2,200,000</b>	<b>12,200,000</b>	<b>14,400,000</b>

**TABLE IV-1 (Revised). Resource Impacts by Alternate  
 (With Two-Lane Alternates)**

	Alt A1	Alt A2	Alt B1	Alt B2	Alt C	Alt D	NB w/ Imp.
<b>Natural Environment</b>							
Wetland Impacts	0	0	0	0	0	0	0
Permit Challenge	Individual	General	General	General	None	None	General
Forests Impacts (acres)	1.61	.52	1.27	1.39	.18	None	1.21
<b>Two-Lane Option</b>	-	.29	.71	-	.10	None	-
Floodplain (acres)	.528	1.652	0.578	1.016	None	None	None
<b>Two-Lane Option</b>	-	.92	.32	-	None	None	None
RPA (Waterway Buffer) (acres)	4.6	5.63	8.1	8.47	None	None	0.06
<b>Two-Lane Option</b>	-	3.13	4.5	-	None	None	-
Stream Crossings	3	2	2	5	None	None	None
<b>Cultural Resources</b>							
Potential for Disturbing Historic/Prehistoric Archeological Resources	Medium Potential	Medium Potential	High Potential	High Potential	High Potential	Medium Potential	Medium Potential
Known Archeological Sites Within 100'	No known sites	No known sites	2 known sites	2 known sites	2 known sites	No known sites	No known Sites
Potential for Disturbing Historic Resources eligible or listed on the National Register	None	None	None	None	None	None	None

**TABLE IV-2 (Revised). Socio-Economic Benefits and Impacts by Alternate  
 (with Two-Lane Alternates)**

	Alt A1	Alt A2	Alt B1	Alt B2	Alt C	Alt D	NB w/ Imp
<b>Socio Economic Benefits</b>							
Change in emergency response time to Point A	N/A	N/A	N/A	N/A	-3.33	-2.33	Zero
Change in emergency response time to Point B	-1.96	-1.68	-2.07	-2.15	N/A	N/A	Zero
Community facilities within ½ mile of termini	3	3	4	5	4	7	N/A
Bicycle or general use trails connected	2	2	3	4	2	2	Zero
<b>Cultural Resources</b>							
Acres of Parks taken	1.99	0	3.27	3.63	0	0	0
<b>Two-Lane Option</b>	-	0	1.82	-	0	0	0
Park activities impacted	1	0	2	2	0	0	0
Potential for through traffic in residential areas	Low	Low	Low	Medium	Medium	Low	None
Number of residences taken	0	---	0	0	0	0	0
Number of businesses taken	8	9	0	0	4	3	9
<b>Two-Lane Option</b>	-	6	0	0	0	0	-
Number of sensitive noise receptors ¼ mile	1	1	3	3	2	1	---
Number of residences within 500'	11	0	331	325	156	145	---

#### IV. Conclusions

The alternative two-lane sections will have less impacts and lower costs. The traffic benefits from improved connectivity will be slightly impacted by the reduced section. Generally, overall delays will be increased about 10%.

The two-lane section will not have a median, and only standard shoulders. It will be more difficult to reroute traffic around accidents on the roadway. Snow removal will also be more difficult without the median. Finally, future expansion will be difficult.

- 1) Once again, please provide a rational reason as to why the need for a connector:

In staff's professional view, the City should move forward with an additional roadway connection between Eisenhower Avenue and Duke Street because of the following conclusions (which are explained in detail in the staff report):

1. **A connector will improve traffic movement on existing roadways (Van Dorn Street, Telegraph Road, Duke Street and Eisenhower Avenue).** This will in turn:
  - Make travel in the area easier for Alexandrians;
  - Reduce traffic congestion and delay in the Eisenhower Valley area; and
  - Result in less through traffic in the neighborhoods (when compared with the amount of such traffic projected to occur in the future without a connector), especially when combined with neighborhood traffic mitigation/calming measures.
2. **A connector improves connectivity between two major arterials, Eisenhower Avenue and Duke Street:**
  - It provides a needed additional point of access to and egress from Eisenhower Valley;
  - It helps create a roadway grid system that will increase the efficiency of existing roadways; and
  - Connectors between two parallel arterials typically occur approximately one mile apart; in this case, the distance between the Van Dorn and Telegraph connectors is 3.5 miles.
3. **A connector enhances public safety in the area:**
  - It provides additional routing options for responding police, fire and emergency medical service (EMS) vehicles and personnel
  - It reduces response time for units dispatched to and from Eisenhower Valley;
  - It eliminates the need for responding units to use non-roadway points of access and egress; and
  - Locating new public safety facilities in Eisenhower Valley will help the problem, but not solve it. Mutual-aid needs will continue to necessitate travel to and from the Valley, fire units in the Valley will need to provide back-up response for incidents outside the Valley, and EMS units must be able to efficiently transport patients from the Valley to area hospitals.
4. **A connector potentially protects residential neighborhoods by encouraging vehicles to remain on the major roadways:**
  - Traffic intrusion into residential neighborhoods results primarily from delay and congestion on the major arterial and collector roadways; and
  - A connector reduces delay and congestion on such major roadways and, in many cases, the potential for "cut-through" traffic on residential streets (when compared with the amount of such traffic that is projected in the future without a connector).

5. **A connector relieves current and future congestion at the Telegraph Road and Van Dorn Street interchanges on I-495, helping to avoid major improvements to these interchanges:**
  - Use of the Clermont interchange is increased significantly by a connector; and
  - Demand at the Telegraph Road and Van Dorn Street interchanges is substantially reduced by a connector.
  
6. **A connector supports the economic vitality of Alexandria responding to transportation needs in Eisenhower Valley:**
  - An additional access point is created for Eisenhower Valley;
  - Movement between Eisenhower Valley and the rest of Alexandria is improved and increased; and
  - Residential, employment and social/recreational opportunities are more accessible
  
7. **A connector does not attract a significant amount of new traffic to Alexandria roadways; nor does it increase significantly the amount of traffic "cutting through" Alexandria.**
  
- 2) Do we have economic impact analysis for each of the "Build Options"; if so, please provide; if not, why not?

Beyond the Fuller Study, included in the docket item (Attachment 8, Task Force Report, Appendix 6 - note pages 3 through 5), and the costs to the City (Attachment 7, Staff Report, Table 8), there is no further information. After 15 months of Task Force meetings with two business representatives as part of the Task Force, the referenced information represents the Task Force's deliberation on this element of consideration.

- 3) What input, if any, for all of the options did the Planning Department provide? Same for Parks & Rec?

Kimberly Fogle of Planning and Zoning attended many of the meetings and brought the East Eisenhower planning process into the discussion. Parks and Recreation - staff and Board members have been to the meetings/hearings.

- 4) Why isn't the issue of a connector not part of an overall "Transportation Management Plan"? And when will this plan be available?

The Eisenhower Connector Study has used information from the Comprehensive Transportation Policy and Program. While the connector could be part of the Comprehensive Transportation Policy and Program, the issue of a desirable grid system is a basic tenet of transportation engineering and planning. Quite clearly, the Eisenhower Connector has so much emotional thrust that the concepts brought forth relating to transit, access management and pedestrian safety will be consumed. The City has 22 ½ miles of arterial roadway and only ½ mile of additional roadway added with a connector.

- 5) Are there quite possibly other solutions, other than a "Connector" to the traffic reduction desires on Duke St.?

There are other ways to deal with a Duke Street problem but to provide the connectivity from Duke Street to Eisenhower Avenue, the public safety aspects and address the diversion of traffic into neighborhood, a connector (2 or 3 lane) should be a part of the consideration.

- 6) What are the guarantees that Option B1 will not open the flood gates for outside of the City traffic to use it, further impacting Duke St.?

Traffic can certainly be monitored when it comes to concerns for neighborhood cut-through traffic. As stated, the volumes of projected traffic on local streets is relatively low and can be easily handled with traffic calming, traffic turn regulations/restrictions, street closures, etc.

**1. How will a connector make travel easier for Alexandrians vs. others traveling on Duke Street?**

- A connector allows Duke, which is capacity constrained, to work in tandem with Eisenhower, which has capacity available. Available capacity is utilized first by local travelers or Alexandrians. This statement is based on analysis performed on the connectors themselves and Quaker. See Table 7 in the Staff Report.
- During congested conditions (peak periods), the share of non-Alexandrian traffic on Duke Street is not expected to change as a result of the connector and, therefore, with available capacity on Duke Street, the number of Alexandrians able to travel increases.
- The connector also offers Alexandrians choices for mobility during off-peak periods when the volume on Duke at Van Dorn and Beauregard rival those off-peak periods. Alexandrians have greater mobility options with a connector during these off-peak periods to access amenities in the Eisenhower Valley.
- By keeping arterial traffic on arterial roadways, the City can lessen traffic diverted through neighborhoods, thereby freeing up those roads for Alexandrian travel.

**Table 7. External Traffic on Connector and North Quaker Lane**

	Existing	Alternate 2020					
		No Build	No Build w/ Imp.	Alts A1/A2	Alts B1/B2	Alt C	Alt D
<b>Duke-to-Eisenhower Connector</b>							
External to Study Area	N/A	N/A	N/A	57%	67%	76%	66%
External to City	N/A	N/A	N/A	35%	38%	33%	30%
<b>North Quaker Lane</b>							
External to Study Area	N/A	43%	44%	43%	44%	43%	43%
External to City	45%	34%	35%	34%	35%	34%	33%
Average Daily Traffic Volume	22,000	28,500	30,200	28,500	32,900	31,500	32,000
Volume External to City	9,900	9,700	10,700	9,800	11,500	10,600	10,600
Percent Change	Base	-2%	+8%	-1%	+16%	+7%	+7%

**2. How can we be certain that a connector will not increase traffic driving through Alexandria? (Section 1, page 9)**

- As you know, no decision can ever be made with absolute certainty and to have absolute certainty would result in no land use transportation decisions. The City has done the origin/destination counts during the times when the Task Force specified – school was in session, and on a typical day of travel. The City used the traffic and socio-economic data used by every locality in the region for transportation land use and housing decisions. In addition, the City specified the method after consulting with the Task Force and used macro and micro models to give both arterial and local traffic data.
- We are projecting an increase in traffic traveling through Alexandria. This increase is not as dramatic as initially thought, and is shown in the same table referenced above as well as the table shown on the next page.
- We are certain that the increase will be modest for the following reasons:
  - a. There will be greater demand for Quaker, Duke and other arterials from Alexandria-bound traffic
  - b. Conditions are projected to be congested throughout the area of study. There will be are very few examples of time savings for traffic to leave major highways
  - c. Capacity on roads is used by local Alexandria traffic first before through traffic.

**3. With the development of Eisenhower Valley East and West, what will be the full traffic impact when fully built out: a) with a connector; and b) without a connector?**

- Delay at key intersections is expected to **double** between now and 2020. This is due to the growth of all traffic, not just growth attributable to Eisenhower Valley but also the Alexandria population growth and increased travel by our population. In addition, background traffic into and through the City on regional arterials like Duke and Alexandria grows at a rate of 2.5% per year. (See Attachment 7, Table 7, in the Staff Report for Quaker Lane and see Attachment 9 in the Technical Report, Exhibit III-1 for 2000 and 2020 traffic condition for local roadways.) It would be safe to say that Eisenhower Valley is the single largest contributor to that growth introducing 30-40K new trips per day depending on the development mix approval and given the transportation management programs discussed.
- The connectors are projected to decrease total network delay by 15% to 40%.

**4. With a new Woodrow Wilson Bridge, and the new ingress and egress for the Eisenhower Valley, what will be the impact on Alexandria with and without a connector?**

- All of the City future analysis assumed the new ingress and egress to be in place.

- Without the new ingress and egress, congestion on Telegraph and Route 1 will be greater. This is true with or without a connector.

**5. If a connector will increase the use of Clermont why wouldn't it increase the traffic in Alexandria? (Who will use the Clermont exit who doesn't use it now?) (Section 7, page 9)**

- The sources of traffic for Clermont will be similar to that for the Connector. Telegraph, Van Dorn, Route 1, Holland and Washington Street traffic will all contribute to the increase in traffic on Clermont.
- Table IV-4 below shows that the projection for B1 is 37,200 vehicles per day. Van Dorn, Telegraph, Holland, Route 1 and Washington Street decrease collective by 32,000 vehicles per day. The difference, 5,200, we may conservatively assume\* are new trips through the City.
- \* *actually some of the 5,200 may have had an origin or destination in the City, but did not use Van Dorn, Telegraph, Holland, Route 1 or Washington Street before.*
- Interestingly, B1 is projected to have 1,800 new external daily trips on Quaker. So, about 1/3 of the 5,200 trips are expected to continue from B1 to Quaker. (See table below.)

**Table IV-4 : Connector Traffic and Sources Average Daily Traffic, 2020**

	A1	A2	B1	B2	C	D
<b>Total Connector ADT</b>	<b>23,400</b>	<b>21,000</b>	<b>37,200</b>	<b>33,200</b>	<b>31,500</b>	<b>29,500</b>
Van Dorn Street	12,000	12,000	11,400	8,300	4,300	4,300
Telegraph Road	1,100	1,100	6,000	4,000	13,200	12,000
Other Roadways in Alexandria	8,300	6,700	14,600	15,500	10,200	9,600
I-395 or Roadways outside Alexandria	2,000	1,200	5,200	5,400	3,800	3,600

**6. What additional traffic mitigation will be used other than a connector should a connector be accepted?**

- The comparatively low volume of traffic seen on local roadways is able to be mitigated, if needed, through local roadway redesign, traffic calming and traffic regulation.

**7. If the idea is to limit traffic, why does the chart on page 15, section 7 state that traffic will increase more with build options than with no-build options?**

The idea is not to limit traffic, but to ease congestion on arterials which make it more difficult (increase travel time) on more local streets by utilizing traffic calming, traffic regulations (no turn restrictions, etc.), local street redesign (closures, etc).

**8. How will the connector enhance development in Eisenhower Valley? How will the lack of a connector limit development in Eisenhower Valley? What is the economic impact on Alexandria?**

The development in the Eisenhower Valley was modeled using the existing eight million square feet (includes PTO related development and five million more square feet of development). Please see the Fuller Study contained in Attachment 8, Appendix 6, of the Task Force report and attached memo from C. Smith-Page, Director of Real Estate. The Fuller Study examined B – the central-most of the connectors.

**9. Why is “C” not given as much value as “D” or “B1”?**

Alternate C, D and B1 all have advantages and disadvantages.

- B1 has the greatest traffic benefit, but has the greatest environment and park impacts.
- C is the easiest to construct. However, there are unresolved operational issues at Wheeler/Duke/Quaker.
- D will do the most for East Eisenhower. However, it will require a large bridge and terminates opposite Cambridge. (note – traffic may be prohibited from traveling from the connector to and from Cambridge and Yale).

**10. Why is Quaker Lane “off limits”?**

The impact to Quaker lane, the make up of traffic on Quaker lane, the existing traffic characteristics on Quaker Lane, the potential through traffic on Quaker Lane, have all been examined. There is little more to study on Quaker Lane.

Quaker Lane is not included in the potential cut-through analysis because it is from Quaker Lane that the traffic is diverting. The external traffic on Quaker Lane is the “equivalent” of that analysis.

**11. Why are we not making significant improvements to the Braddock, Quaker, King intersection?**

- Over the past three decades, this unique intersection has been studied for construction of an overpass and underpass as well. Primarily, residents in the areas of Seminary Hill, North Ridge and Cover/College Park have opposed any improvement which would increase capacity and thereby make travel easier on Quaker Lane for Alexandrians (65% from Staff Report Table 7), as well as non-Alexandrians (35% from Staff Report, Table 7). During the study period, a Seminary Hill Board member contacted me as he had accidentally taken a full size, rolled aerial of the intersection from the consultants’ belongings. The citizen expressed extreme concern about any changes to this intersection. The intersection is seen as and does “meter” travel on this roadway by increasing travel time on the arterial where many residents reside.

Due to this issue and much related discussion, the Task Force assisted in establishing the study area which did not include this intersection.

**12. Why wasn't a highway-type connection built or considered between I-395 and the Beltway at Van Dorn and Duke in Landmark?**

A highway-type connector does not serve Alexandrians as much as another alternate would.

**13. If "D" is one of the least effective routed for improving total network delay, why is it still being considered? (Section 7, page 9)**

Total network delay is just one of many traffic considerations. Traffic is just one of many criteria that should be examined. Factors of consideration are listed in the matrix under Attachment 8, Task Force Report, Appendix 1.

**14. Wait times and network delays are confusing. It appears that there are insignificant differences between the various alternatives except no build and "C". Why is that? (Section 7, page 14)**

The small differences are due to extreme congestion on City roadways. Total network delay provides the best proxy for overall performance. (See Attachment 7, Table 4, and note the Van Dorn Mall Ext. Alternate C should read 163 seconds not 263 seconds).

**15. Alternate "C" offers the lowest number of cut-through estimations for residential roads except Jordan, but "C" is not considered a preferred alternative. Why is that? (Section 7, page 14)**

The improvement with C is not considered large. And again, this is just one traffic service indicator.

**Table 6. 2020 Potential Peak Hour Cut-Through Traffic Volumes**

Street	Neighborhood Cut-Through Traffic (vehicles per hour)					
	No Build	No Build w/ Imp.	Alts. A1/A2	Alts. B1/B2	Alt. C	Alt. D
West Taylor Run	430	780	310	350	200	420
Cambridge <sup>1</sup>	130	20	120	110	80	40
Fort Williams	120	80	190	190	50	40
Jordan	290	340	500	360	450	140

**16. The preferred alternate "B1" has the highest number of cut-through estimations. Why is it preferred? (Section 7, page 14)**

The potential cut through is not significantly higher than the "no build".

**The top portion of Table 7 in Section 7, page 15 is confusing? Please explain. The bottom portion suggests that all except no build with improvements will have higher external traffic. Why is that? How does this table support a connector?**

- ✓ Table 7 shows external traffic at Quaker Lane. The No Build is projected to have 9,700 external trips per day by 2020. All of the alternates, including No Build With Improvements, are projected to have more than 9,700 external trips per day by 2020.
- ✓ Generally, the share of External stays the same in 2020, about 34%
- ✓ The largest increase is B1, with 1,800 new external trips per day. This is about 180 during a busy peak hour. Or 3 per minute.
- ✓ The potential for cut-through (question 16) is greater as a result, but not significantly so.

**17. Have all of the financial considerations been entered except the purchase of replacement land for "B1"? What additional purchases of land are missing from financial estimations on Table 9, Section 7, page 16?**

The cost estimates are preliminary and were prepared to provide a comparative analysis. It is too preliminary to determine specific right of way purchases.

**18. According to the rankings in Table 10, Section 7, page 18 D and then C should be the preferred options not B1 and D. Why does the staff recommend B1 first and then D?**

As noted on page 19, the differences among the overall rankings for Alternates B1, B2, C and D were considered to be significant decision differences. Given comparable overall rankings, staff recommended Alternate B1 based on its higher traffic service benefits. Alternate B1 did not eliminate staff concern regarding the ultimate feasibility of B1, and Alternate C potentially created a difficult weaving condition on Duke Street. Alternate D was therefore selected as the "second choice" Alternate.

**19. Why were different categories weighed more heavily than others? For example, why was traffic benefits weighed more heavily than social impact in Table 11, Section 7, page 20? How were the categories defined for their relative importance in the weighing process? If the weighting for each category was the same, we would have a different result.**

In order to maintain balance between benefits and impacts, 100 total weighting points were available for each. Within the overall benefits category, each benefit criteria was weighted relative to all other benefit criteria while holding the total weight for all benefits at 100 points. Impact criteria were similarly weighted against all other impact criteria, with the total weighting for impacts held to 100 points. This process maintained balance between benefits and impacts with the intent of seeking to identify those alternates with the lowest impacts and highest benefits. The category weights in Table 10 (i.e. Traffic Benefits and Socio-Economic Impacts) were not

assigned weights, they simply represent the total points assigned to the individual criteria in each category. If the criteria weights were changed, the results would also change.

**20. Section 8 has contradictory statements on page 6 under Alternate C. How was this resolved in the task force meetings?**

Staff cannot locate reference statements.

**21. Section 9 has many statements of findings, but lacks supporting evidence.**

This section, *Conclusions*, is a summary. Therefore, detailed discussion was not presented.

**Please explain why:**

- **External traffic is not expected to increase as a percentage of volume on Quaker.**  
As seen on other area arterials, the percentage of external traffic is relatively constant over all alternates. This is attributed to (1) growth in Alexandria travel displacing external travel and (2) the relatively low regional impact of the connector alternates.
- **Why will Quaker become a slightly less attractive route in the next 20 years?**  
Assuming reference is to the decrease in external traffic, please see previous item, point (2).
- **Why does C and D provide the greatest eastbound a.m. movement at Duke and Daingerfield?**  
Presuming this question relates to reductions in queue lengths (Table 5, page 11), the progressively greater spacing between the Duke Street / Daingerfield Road intersection and the other alternates reduces the local influence of those alternates. Simply put, the others are too far away to have significant impact on this intersection.
- **How do all alternatives improve Duke and Quaker, with greatest benefit with No Build?**  
Presuming this question also relates to reductions in queue lengths (Table 5, page 11), the No Build with Improvements alternate adds an additional eastbound lane on Duke Street from Quaker Lane to the existing Telegraph Road on ramp. This increased capacity allows reallocation of signal capacity, thereby reducing queuing on Quaker Lane.
- **Why does C provide some relief to Van Dorn and Edsall, but no other alternatives? Doesn't this suggest increased traffic on Quaker?**  
Alternates B1, B1, C and D provide essentially the same degree of improvement at this intersection (see Table 4, page 10).

- **If no build with improvements provides relief to Van Dorn and Pickett and Edsall, as well as the most improvements at Quaker and Duke, why is it not more favored?**

This alternate improves operating conditions by converting Van Dorn Street to an expressway and widening Duke Street and Telegraph Road. It does not offer any improved accessibility to Eisenhower Valley or better connectivity between the Valley and the remainder of the City.

- **Why will No Build with improvements increase traffic on West Taylor Run?**

It is assumed that this question refers to data presented in Table 6, page 14. These data are estimates of potential cut-through volumes, not total volumes. This increase is most likely attributable to the increased capacity on Duke Street provided by this alternate, attracting vehicles through the Clover-College Park area.

- **Have the Average Daily Traffic (ADT) counts been calculated for AM/PM rush hours of for any time?**

This question is unclear. ADT volumes were used for general reporting purposes; however, AM and PM peak hour volumes were used for operational analyses.

**22. How does the connector fit into other long range comprehensive traffic plans for the development in the city?**

The City should be striving to keep arterial traffic on arterials and one of neighborhoods and off of local streets. This is the basis for our Comprehensive Study to be rolled out in January, our successful neighborhood traffic calming program, T&ES pedestrian programs and the Eisenhower East traffic methodology.

**23. Why is the development of Eisenhower Valley not entered into the equation when it has so much to do with the decision? What is the financial impact on the City of Build vs. No Build vs. No Build with improvements?**

This will be addressed at the meeting.

**24. What is the long-range vision for the City of Alexandria and how does the connector fit in that vision?**

Please see responses to questions 1, 2 and 3 regarding transportation issues.

Phil Sunderland  
10/21/2002 12:13 PM

To: Rich Baier/Alex  
Subject: Response to Eisenhower ques.

----- Forwarded by Phil Sunderland/Alex on 10/21/2002 12:24 PM -----



Cindy Smith-Page  
10/21/2002 11:13 AM

To: Phil Sunderland/Alex@Alex  
cc: Mark Jinks/Alex@Alex  
Subject: Response to Eisenhower ques.

Phil,

With the connector and easier access I would have to assume the value of property would increase in possibly 2 ways:

1st - If the zoning and development potential were to remain the same, the values should increase based on the higher visibility of Eisenhower and the access to and from;

2nd - The zoning may very well change allowing higher densities which would in turn increase property values since the development potential is what drives the value of commercial values.

In summary, the 1st would better the location of the property in the valley, hence, higher values; and 2nd, development potential would most likely increase and would then increase values even more.

Let me know if you need more info.

Cindy Smith-Page, ASA  
Director  
Real Estate Assessments  
(703) 838-4575



William Skrabak  
10/22/2002 12:05 PM

To: Nancy Coats/Alex@Alex  
Subject: Questions submitted by Thomas Parry

Responses are in **BOLD**.

Page 13, Environmental, Planning and Other Considerations

#37 Does the Technical Report properly take into account a connector's impact on air quality?

**The studies to date did not evaluate impacts to air quality. This would more appropriately be addressed in the Environmental Assessment or the EIS phase of the project.**

a. Mr. Cunningham's comment: "While it is appropriate that the Technical Report In BII-5 references VDEQ concerning air quality, it would be more appropriate if the Technical Report referenced WASH COG and its efforts to address the region's severe ozone non-attainment status. Note: Mayor Donley and Councilwoman Pepper are the City's representatives to WASH COG: Councilwoman Pepper is on the WASH COG Metropolitan Washington Air Quality Committee (MWAQC)."

**It is true the region is in non-attainment for ozone, and the MWAQC is responsible for developing an attainment plan. MWAQC, WASH COG and the TPB are all involved insuring the regional TIP and CLRP meet the transportation conformity rule. This is not usually done for small individual projects but for the entire regional transportation plan as a whole. If and when the connector is added to the TIP and CLRP it would be evaluated for conformity as part of the regional plan.**

b. Further, "since Washington metro region is in severe non-attainment for ozone, the Technical Report needs to reference the requirements associated with the U.S. EPA's Clean Air Act General Conformity Rule.

**The General Conformity Rule does not apply, but the Transportation Conformity rule does. See above for the process. The General Conformity Rule applies to non-vehicular or road projects such as airports, etc.**

William J. Skrabak, Division Chief, Environmental Quality  
Department of Transportation & Environmental Services  
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301 King Street  
Alexandria, Virginia 22314

Phone: 703-519-3400 ext.163 or 703-838-4334  
Fax: 703-519-5941

*City of Alexandria Fire Department***MEMORANDUM**

DATE: 22 OCTOBER 2002

TO: THOMAS HAWKINS, FIRE CHIEF

FROM: CHRIS LEISCHNER, BATTALION CHIEF *Chris*

SUBJECT: RESPONSE TO QUESTIONS RELATED TO THE DUKE STREET -  
EISENHOWER AVENUE CONNECTOR

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What are the nationally promulgated standards for fire, emergency medical services (EMS) and police response times? Is Alexandria currently in compliance with such standards?

The National Fire Protection Association (NFPA) released a *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments*. Section 4.1.2.1.1 states: *The fire department shall establish the following time objectives:*

- (2) *Four minutes (240 seconds) or less for the arrival of the first arriving engine company at a fire suppression incident and/or 8 minutes (480 seconds) or less for the deployment of a full first alarm assignment at a fire suppression incident.*
  
- (3) *Four minutes (240 seconds) or less for the arrival of a unit with first responder or higher level capability at an emergency medical incident.*

Does a connector at B1, a connector at D or improvements to existing intersections better serve public safety purposes?

Fire Department response data from February 2000 through February 2001 indicates the first due company response time along Eisenhower Ave. from approximately the 5000 block to Bluestone Rd. at greater than 5 minutes. This data also indicates the approximate area from Bluestone Rd., East to Holland Lane as having a response time of 4:30 - 4:99 minutes. These results indicate at connector B1 would provide the greatest improvement in emergency response times.

To what extent does a connector at B1 impact fire/EMS equipment response times in comparison to the impact on fire/EMS equipment response times by a connector at D? Previously answered in above response.

P2

22 October 2002

Thomas Hawkins

How is Eisenhower valley served by adjacent fire stations? And to what extent would an Eisenhower Valley fire station provide secondary coverage for areas primarily served by other Alexandria and Fairfax fire stations?

Alexandria fire station 5 – 1210 Cameron Street serves as the primary company on Eisenhower Avenue from Holland Lane, West to Mill Road.

Alexandria fire station 7 – 3301 Duke Street serves as the primary company on Eisenhower Avenue from Mill Road, West to the 4600 block of Eisenhower Avenue (Holmes Run Channel).

Alexandria fire station 8 – 175 N. Paxton Street serves as the primary company on Eisenhower Avenue from the 4600 block (Holmes Run Channel), West to Van Dorn Street.

Assuming an additional fire station (station 9) is constructed in the Eisenhower Valley, in approximately the 2700 block, this company would become the primary company from Holland Lane, West to the 5000 block of Eisenhower Avenue.

What Alexandria fire stations have equipment that can reasonably access Eisenhower Valley? What parts of Alexandria are reasonably accessible by equipment located at an Eisenhower Valley fire station?

Alexandria fire station's 5, 7, & 8 can reasonably access Eisenhower Valley. These stations have the necessary equipment to provide initial fire suppression activity and basic life support emergency medical care.

A future fire station 9, located in the Eisenhower Valley, could reasonably be expected to provide primary response to:

- Eisenhower Avenue from Holland Lane, West to the intersect point of connector proposal D. The Duke Street corridor from Reinekers Lane, West to W. Taylor Run Parkway with in a 2-minute response time.
- From Henry Street on the East border, the 4600 block of Eisenhower Avenue on the West border, and the Dartmoth Road area on the North border, with in a 3-minute response time.
- From Royal Street on the East border, the 4800 block of Eisenhower Avenue on the West border, and the 2800 block of King Street on the North border, with in a 4-minute response time.
- From the river on the East border, Van Dorn Street on the West border, and T. C. Williams High School on the North border, with in a 5-minute response time.

P3

22 October 2002

Thomas Hawkins

What Fairfax fire stations have equipment that can reasonably access Eisenhower Valley?  
What parts of Fairfax are reasonably accessible by equipment located at an Eisenhower Valley fire station?

Fairfax County station 5 – 6300 Beulah Street (Franconia) and Fairfax County station 11 – 6624 Hulvey Terrace (Penn Daw) provide support to the Eisenhower Valley.

Proposed Alexandria station 9 would be expected to provide Fairfax County with support in the Burgundy Farms, Rose Hill and Franconia areas. This station would also become the primary company for response on the Capital Beltway from Telegraph Road, North to Route 1 and South to Van Dorn Street.

What is the status of the City's planning for a fire station in Eisenhower Valley?

The Alexandria Fire Department is currently in a fire station site location analysis for a station in the Eisenhower Valley. This study is to include:

- Site design
- Building design
- Project budget

What is the projected time frame for building a fire station in Eisenhower Valley?

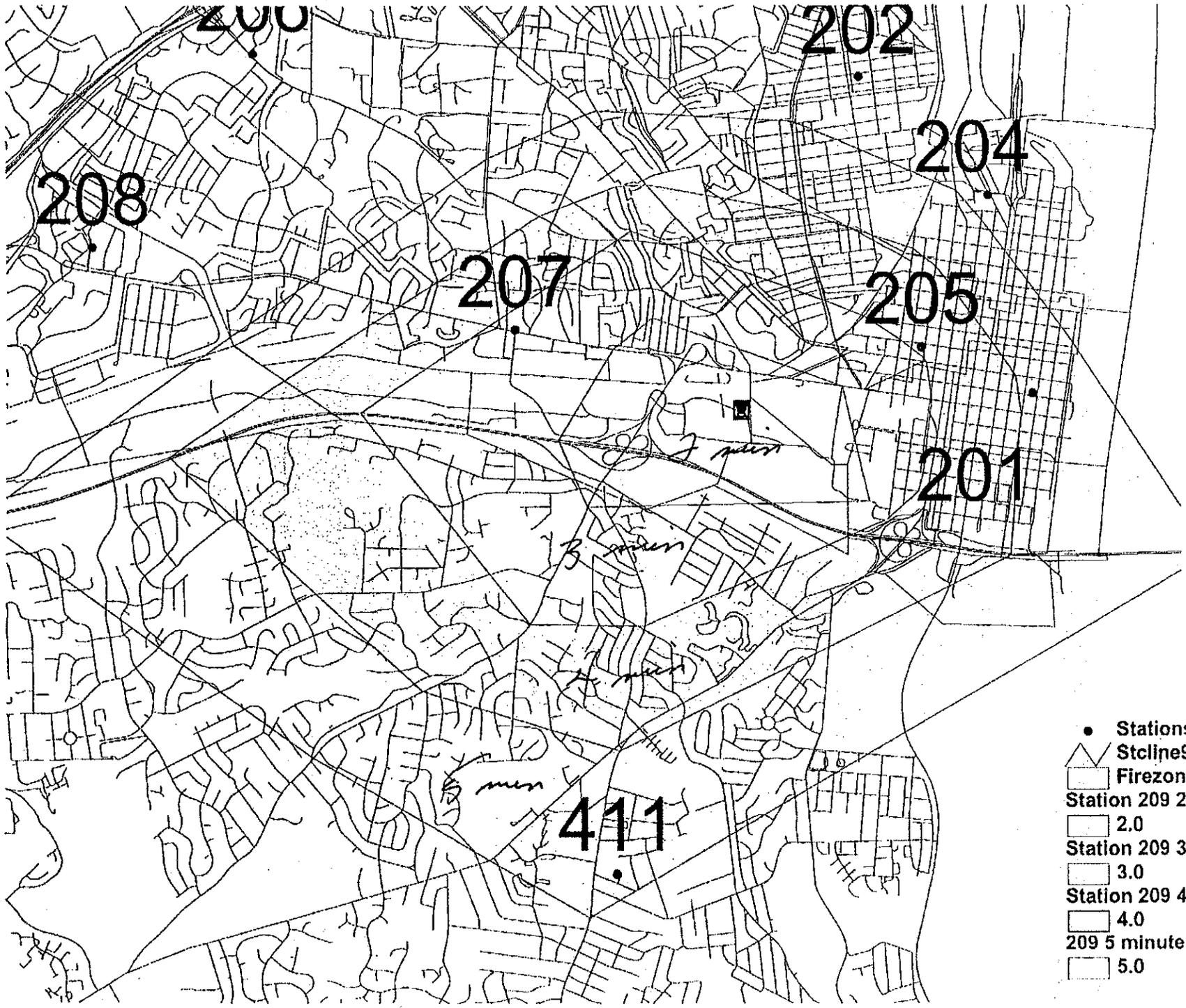
The fire department would like to put station 9 into operation within five years.

Have any sites been identified preliminarily for a fire station in Eisenhower Valley?

One City owned parcel in the 2700 block of Mill Road has been evaluated.

D = Roth St./ Cambridge Road Rt.

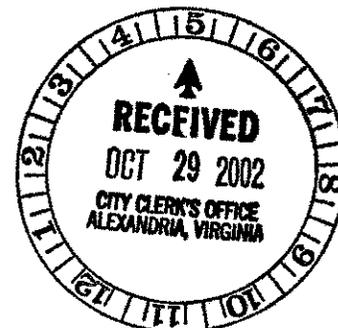
B1 = Duke Street interchange at Cameron station to Clermont Avenue.



- Stations.shp
- ▲ Stcline99.shp
- Firezone.shp
- Station 209 2 minutes
- 2.0
- Station 209 3 minutes
- 3.0
- Station 209 4 minutes
- 4.0
- 209 5 minutes
- 5.0

X-From\_: loumail Tue Oct 29 15:20:50 2002  
 X-Sender: loumail@pop.valueweb.net  
 X-Mailer: QUALCOMM Windows Eudora Version 5.1  
 Date: Tue, 29 Oct 2002 15:17:52 -0500  
 To: "Vice Mayor Cleveland" <billclev@comcast.net>,  
 "Mayor Donley" <mayoralx@aol.com>,  
 "Councilwoman Eberwein" <EberweinCouncil@comcast.net>,  
 "Councilman Euille" <WMEuille@wdeuille.com>,  
 "Councilwoman Pepper" <delpepper@aol.com>,  
 "Councilman Speck" <DSpeck@aol.com>,  
 "Councilwoman Woodson" <Council@joycewoodson.net>  
 From: Cordia Companies <Lou@cordia.com>  
 Subject: Connector Work Session Tonight

WS  
 10-29-02



To: ALEXANDRIA CITY COUNCIL

From: Lou Cordia  
 Alexandrians Against A Highway Connector

Re: Connector Work Session Tonight

Please consider these two items.....

(1) November 26th Vote: Please do not delay the vote on the connector any further. Originally scheduled for October 23rd, then November 12th, the vote is now hopefully going to occur on November 26th. On behalf of the thousands of Alexandrians who have signed our petition against a connector anywhere, we want to know if our City Council is "for or against" the connector. Let's remember, the connector has had two years to develop and make its case. Just because the city transportation staff could not answer on October 23rd basic questions about its data and justification document, there is no need to string out this decision.....and the patience of your constituents.

(2) Questions: Would you please consider asking these questions tonight? I would suggest that you ask Tom Culpepper who is more direct and forthright than Rich Baier.

- a) At the October 23rd Work Session, City Manager Sunderland said the transportation staff would present "Pros and Cons" on the connector issue. We heard all of the "Pro-Connector" arguments. Asking you to be objective staff, what would you say are the three best arguments against a connector anywhere?
- b) Would you please delineate what the negative traffic impacts are on the neighborhoods north of Duke Street?
- c) What city offices other than the transportation department and/or outside expert consultants did you use as the basis of your economic analysis, environmental assessments, and any other non-transportation projections?
- d) At the October 23rd Work Session, you said that the traffic projections for the year 2020 that determined how many cars would go down which streets, had a "25% Error Factor." Is there also a 25% error factor in the economic projections, environmental impacts, and other forecasts?
- e) At the October 23rd Work Session, you repeated that drivers are creative and will take routes based on time, distance and convenience. How can you prove to nervous neighborhoods that creative drivers in the year 2020 will not cut through their neighborhoods, and instead go along the routes your model suggests?
- f) What do you say to nervous neighborhoods who say your license-plate survey only captured the traffic that currently uses Alexandria streets, and totally ignores the creative driver from Fairfax County who once a connector is built will begin to use our neighborhoods as cut-through?
- g) Is there anything precluding the City of Alexandria from choosing only a few of the improvements on the "no build with improvements" option or choosing only a few improvements that are not on the "no build with

improvements" options that would help reduce traffic in Alexandria and be at a far lower cost than the \$55 million of "no build with improvements?"

h) At the October 23rd Work Session, did you say that an environmental assessment would need to be done on all six build options if the City Council voted yes to a connector? In other words, if the City Council accepted your recommendation of Cameron Station and Roth/Cambridge, what environmental assessment would be conducted on the other four build options and two "no-build options?"



Susan K Seagroves  
10/30/2002 11:47 AM

To: ghparry@fortebrio.com @ INTERNET  
cc: delpepper@aol.com@internet  
Subject: Re: summary of last night's connector work session

Okay. I have thoroughly reviewed my notes. Please see my notes below . Thanks for being so patient.  
ghparry@fortebrio.com



ghparry@fortebrio.com  
10/30/2002 09:06 AM

To: Susan K Seagroves@Alex  
cc:  
Subject: Re: summary of last night's connector work session

thank you thank you!!

Ginny

> From: susan.k.seagroves@ci.alexandria.va.us  
> Date: Wed, 30 Oct 2002 8:11:36 +0000  
> To: ghparry@fortebrio.com  
> Subject: Re: summary of last night's connector work session  
> > I'll get to that as quickly as I can! ss  
> > > ghparry@fortebrio.com  
> 10/30/2002 07:20 AM  
> > To: Susan K Seagroves@Alex  
> cc: delpepper@aol.com @ INTERNET  
> Subject: summary of last night's connector work session  
> > Susan,  
> > Del and I would very much appreciate it if you would review the following  
> and let me know if this jives with your notes from last night. I would  
> appreciate it if you could do this as soon as your very busy schedule  
> permits.  
> > I know I'm being a really pushy citizen, but I know you will be very  
> understanding.  
> > Thanks so much. Ginny  
> > > > Summary of 10/29/02 connector work session:  
> > 4-lane connector is no longer under consideraton; -- correct  
> > new analysis will be undertaken by city transportation staff of 2-lane  
> alternatives; -- staff to continue with the analysis of two-lane streets  
> > planning and zoning and parks and recreation staff and chief of police will  
> be part of the new study team; -- Planning & Zoning, Parks & Recreation, Police and Fire will continue  
the analysis  
> > no build with improvements is still under consideration; and -- correct  
> > no build is still under consideration. -- correct  
> > > > >